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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/046,912	01/17/2002	Yong-Jun Lim	Q67327	3408

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2100 Pennsylvania Avenue, NW  
Washington, DC 20037-3213

EXAMINER
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SHAW, PELING ANDY

ART UNIT	PAPER NUMBER
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2144

MAIL DATE	DELIVERY MODE
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09/04/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/046,912

Applicant(s)

LIM, YONG-JUN

Examiner

Peling A. Shaw

Art Unit

2144

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 June 2007.
- 2a) ☒ This action is **FINAL**.
- 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7,9 and 10 is/are pending in the application.
  - 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7,9 and 10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
  - Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
  - Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some \* c) ☐ None of:
    - 1. ☐ Certified copies of the priority documents have been received.
    - 2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    - 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 05/24/2007.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. Amendment received on 06/20/2007 has been entered. Claims 1, 7 and 9 are amended. Claims 14-15 are cancelled. Claims 1-7 and 9-10 are currently pending.
2. Applicant's submission filed on 01/04/2007 was entered. Claims 1, 7 and 9 were amended.
3. Amendment received on 06/23/2006 was entered into record. No claim was amended.
4. Amendment received on 11/14/2005 was entered. Claims 14-15 were new.
5. Amendment received on 03/15/2005 was entered. Claims 1, 4, 7 and 9 were amended. Claims 2-3, 5-6 and 10 are original. Claims 8 and 11-13 were canceled.

### ***Priority***

6. This application claims a priority # Republic of Korea 2001-38804 on 06/30/2001. The filing date is 01/17/2002.

### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 5-7 and 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nelson et al. (US 5568641 A), hereinafter referred as Nelson and in view of Abgrall (US 6401202 B1), hereinafter referred as Abgrall.

- a. Nelson shows in abstract, lines 1-14 and 18-20, column 1, line 36-45; column 2, lines 22-40, Fig. 1A and Fig. 2; column 4, lines 18-30 (claim 1) a network device (system) capable of upgrading software through a network, comprising: monitoring means for monitoring at least one failure of the network device while the software is being upgraded (Processor 20 is capable of these functions so that it can determine the status of a firmware upgrade and whether the upgrade was disrupted or not); a first memory for storing data necessary for operating the network device (boot block); a second memory for storing information transferred through the network (new firmware downloaded and copied), wherein said second memory is a separate unit from said first memory (separately erasable/writable blocks of memory); a controller for performing control to store the information, which is downloaded through the network to upgrade the software, in the second memory, and store an old version of the software in an empty area of the first memory before the old version of the software stored in the first memory is upgraded with the information stored in the second memory (processor); and a decoder for selecting either the first memory or the second memory, which is used for upgrading the software, according to a control signal received from the controller and a result of monitoring received from the monitoring means, and setting an address (DECODE and NVMEMBIT, XOR, ADDRESS LINES). Nelson does show (claim 1) a conditional access system (CAS) for verifying whether the network device has authority to upgrade the software.
- b. Abgrall shows (claim 1) a conditional access system (CAS) for verifying whether the network device has authority to upgrade the software (column 4, lines 1-7: proper

user authorization to download software modules including drivers, applications and additional payloads via Internet connection) in an analogous art for the purpose of multitasking during BIOS boot-up.

- c. It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify Nelson's functions of powerfail durable flash EEPROM upgrade to include Abgrall's functions of authorizing user to allow download drivers, applications and additional payloads.
- d. The modification would have been obvious because one of ordinary skill in the art would have been motivated to include proper user authorization before download and upgrade drivers and application per Abgrall's teaching in the software/firmware upgrade per Abgrall (column 3, lines 45-49) and Nelson (column 2, lines 22-32)'s teachings.
- e. Regarding claim 2, Nelson shows (Fig. 1A; column 2, lines 22-49) wherein the controller provides a control signal to the decoder to copy the old version of the software to the empty area of the first memory (alternate boot block), erase the old version of the software stored in an original area of the first memory (primary boot block), and copy the information stored in the second memory (new firmware) to the original area of the first memory (primary boot block).
- f. Regarding claim 3, Nelson shows (column 2, line 33-37; column 4, lines 18-30) wherein the monitoring means monitors whether at least one failure occurs in a network device such as a power failure or hang-up of the network device (Processor

20 is capable of these functions so that it can determine the status of a firmware upgrade and whether the upgrade was disrupted or not.).

- g. Regarding claim 5, Nelson shows (Fig. 1A; column 2, lines 15-19 and 23-28; column 4, lines 18-30) wherein when the decoder receives a signal, indicating that at least one failure (Processor 20 is capable of these functions so that it can determine the status of a firmware upgrade and whether the upgrade was disrupted or not) has occurred, from the monitoring means while the software is being upgraded, the decoder returns to the initial state of the network device (alternate boot block).
- h. Regarding claim 6, Nelson shows (column 2, lines 15-19 and 23-28; column 4, lines 18-30) wherein when at least one failure occurs while the old version of the software is being upgraded, after the old version of the software is copied to the empty area of the first memory, the decoder operates so that the network device can be restarted (NVMEMBIT, XOR) based on the old version of the software (alternate boot block containing the old primary boot information).
- i. Regarding claim 7, Nelson shows (in abstract, lines 6-14 and 18-20, column 1, line 36-45; column 2, lines 22-40, Fig. 1A and Fig. 2; column 4, lines 18-30) a network device (system) capable of upgrading software through a network, comprising: monitoring means for monitoring whether at least one failure of the network device occurs while the software is being upgraded (Processor 20 is capable of these functions so that it can determine the status of a firmware upgrade and whether the upgrade was disrupted or not.); a first memory for storing first data necessary for operating the network device (primary boot block); a second memory for storing

second data necessary for operating the network device (alternate boot block); a third memory for storing information transferred through the network (new firmware downloaded); a controller for performing control to store information, which is downloaded through the network to upgrade the software, in the third memory, and store a copy of an old version of the software in an empty area of the second memory before the old version of the software stored in the first memory is upgraded to the information stored in the third memory (processor); and a decoder for selecting one of the first memory, the second memory, and the third memory, which is used for upgrading the software, according to a control signal received from the controller and the result of monitoring received from the monitoring means, and setting an address (DECODE and NVMEMBIT, XOR, ADDRESS LINES); and wherein said first memory, second memory, and third memory are separate memory units (separately erasable/writable blocks of memory). Abgrall shows a conditional access system (CAS) for verifying whether the network device has authority to upgrade the software (column 4, lines 1-7: proper user authorization to download software modules including drivers, applications and additional payloads via Internet connection).

- j. Claim 9 is of the same scope as claims 1 and 7. It is rejected for the same reasons as for claims 1 and 7.
- k. Regarding claim 10, Nelson shows (column 1, lines 45-57) wherein the at least one failure is a failure in the network device which is checked during the erasing and storing steps (considerations of power failure or other disruptions).

Together Nelson and Abgrall disclosed all limitations of claims 1-3, 5-7 and 9-10. Claims 1-3, 5-7 and 9-10 are rejected under 35 U.S.C. 103(a).

8. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nelson and Abgrall, and further in view of Kurihara (JP411328040A), hereinafter referred as Kurihara.

- a. Nelson and Abgrall show claim 1 as above. Neither Nelson nor Abgrall shows the monitoring means on failure in the network. However, Nelson does show the consideration of both power failure and other disruption during the firmware upgrade; and Abgrall does show network connection using TCP/IP (column 9, lines 28-31).
- b. Kurihara shows (in abstract, line 3-5) the monitoring means on failure in the network (download fault from higher order station to base station) in an analogous art for the purpose of memory readout control.
- c. It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify Nelson's functions of powerfail durable flash EEPROM upgrade to include Abgrall's functions of authorizing user to allow download drivers, applications and additional payloads and Kurihara's functions of checking download fault.
- d. The modification would have been obvious because one of ordinary skill in the art would have been motivated to include the network failure consideration in the download phase of firmware (or any software) upgrading per Kurihara's teaching and user authorization before download and upgrade drivers and application per Abgrall's teaching in the software/firmware upgrade per Abgrall (column 3, lines 45-49) and Nelson (column 2, lines 22-32) and Kurihara (abstract)'s teachings.



Together Nelson, Abgrall and Kurihara disclosed all limitations of claim 4. Claim 4 is rejected under 35 U.S.C. 103(a).

*Response to Arguments*

9. Applicant's arguments filed on 01/04/2007 have been fully considered, but they are not persuasive.
- a. Applicant has argued that one skill in the art would have been motivated to combine the teachings of Nelson with those of Abgrall. Examiner does not agree that the motivation is pointed out in Abgrall as quoted "the programs contained in the first software module enables tools and utilities to run at an appropriate time, and with proper authorization, also allow the user to download a second software module that includes drivers, applications and additional payloads through the Internet connection on the PC".
  - b. Applicant argued that the applied references do not disclose or suggest "a first memory for storing data necessary for operating the network device," and a separate "a second memory for storing information transferred through the network," as recited in claim 1. Applicant has amended the claim language with the limitation of "wherein said second memory is a separate unit from said first memory". Examiner has reviewed the claim language change in light of applicant's original specification and claim language. Examiner has reviewed claim rejections and applied prior art as per office action dated 03/20/2007. Examiner has further searched for the limitation and found the current applied prior art, i.e. Nelson, is still applicable. The claim rejection above is updated to reflect applicant's claim changes. Nelson has shown (abstract) erasable/writable blocks of a flash EEPROM, (column 2, lines 22-40) different blocks of EEPROM as primary and alternate book blocks and (Fig. 1A-1B and 2) blocks

selected via DECODE, i.e. blocks are memory units as recited in claim 1. Similar arguments and responses exist in item b, section 8 of office action dated 03/20/2007.

- c. Applicant has raised the similar argument as per amendment dated 01/04/2007, i.e. Nelson does not disclose or suggest “wherein the at least one failure is a failure in the network device which is checked during the erasing and storing steps,” as recited in claim 10. Item d, section 8 of office action dated 03/20/2007 should still apply.
- d. It is the Examiner’s position that Applicant has not submitted claims drawn to limitations, which define the operation and apparatus of Applicant’s disclosed invention in manner, which distinguishes over the prior art. As it is Applicant’s right to claim as broadly as possible their invention, it is also the Examiner’s right to interpret the claim language as broadly as possible. It is the Examiner’s position that the detailed functionality that allows for Applicant’s invention to overcome the prior art used in the rejection, fails to differentiate in detail how these features are unique (see items a-d in section 7). Nelson and Abgrall have shown software/firmware upgrade in the network environment with Nelson’s specific description how firmware would be upgraded in booted memory sections. It is clear that Applicant must be able to submit claim language to distinguish over the prior arts used in the above rejection sections that disclose distinctive features of Applicant’s claimed invention. It is suggested that Applicant compare the original specification and claim language with the cited prior art used in the rejection section above or the Remark section below to draw an amended claim set to further the prosecution.

- e. Failure for Applicant to narrow the definition/scope of the claims and supply arguments commensurate in scope with the claims implies the Applicant's intent to broaden claimed invention. Examiner interprets the claim language in a scope parallel to the Applicant in the response. Examiner reiterates the need for the Applicant to more clearly and distinctly define the claimed invention.

*Remarks*

10. The following pertaining arts are discovered and not used in this office action. Office reserves the right to use these arts in later actions.

- a. Galasso et al. (US 6148387 A) System and method for securely utilizing basic input and output system (BIOS) services
- b. Dayan et al. (US 5287519 A) LAN station personal computer system with controlled data access for normal and unauthorized users and method

*Conclusion*

11. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Refer to the enclosed PTO-892 for details.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peling A. Shaw whose telephone number is (571) 272-7968. The examiner can normally be reached on M-F 8:00 - 4:00.

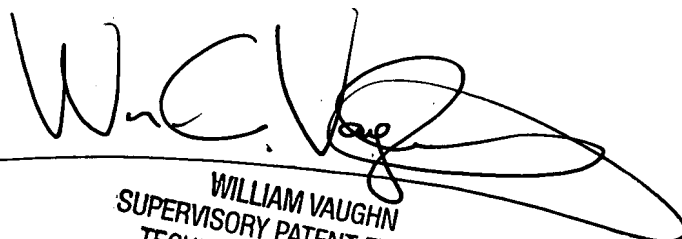
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William C. Vaughn can be reached on (571) 272-3922. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

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A handwritten signature in black ink, appearing to read "W.C. Vaughn", written over a horizontal line.

WILLIAM VAUGHN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY